Examining the Effects of Microfinance Services on Incomes and Business Capital in Ghana: The Case of Sinapi Aba Trust Beneficiaries

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Abstract
Microfinance institutions operate with the underlying philosophy that providing easier access to financial services for low income earners can result in increased incomes and business capital of beneficiaries to assist in reducing income inequality. This paper sets out to examine financial intermediation theory, through microfinance services, to expound its effects on incomes of beneficiaries of Sinapi Aba Trust (SAT) microfinance institution and provides empirical evidence on how microfinance services affect the incomes and business capital of beneficiaries in Ghana. The cross sectional approach was used to collect data from 361 beneficiaries. Both quantitative and qualitative tools were used, and the findings indicate that SAT services led to improvements in beneficiaries incomes. Even though most of the SAT beneficiaries were classified under the lower middle income group, they were earning incomes higher than the national average for the lower middle income group. Beneficiaries in the manufacturing sector earned higher incomes while those from the agricultural, and food sub-sector earned the lowest. Individual loan beneficiaries had the highest incomes compared to those who obtained group loans. It was further identified that larger loan sizes led to increased incomes. The conclusion, for practitioners, is that microfinance has the potential of increasing the incomes of beneficiaries.
Keywords: Beneficiaries, business capital, incomes, microfinance, Sinapi Aba Trust.

1. Introduction
Microfinance is one of the leading development programmes, in terms of financial services and the number of poor people being served worldwide (Rooyen, Stewart & De Wet, 2012). It provides financial intermediation for the poor with the ultimate aim of creating employment and income opportunities to improve their livelihoods. As a financial intermediation tool, the traditional role of microfinance has been to target and provide micro loans to people who are generally not served by formal financial institutions due to their inability to produce collateral. This reflects microfinance's underlying philosophy that providing easy and affordable access to financial services for poor families can have positive effects on their incomes and livelihoods (Yunus, 2003).

According to Mahjabeen (2008), most of the poor families served by microfinance institutions are low-income people who are mainly non-literates and semi-literates and who live in developing countries. They collect loans, in the form of individual and group loans, to undertake business activities. These businesses raise income and consumption levels of families, reduce income inequality and enhance social welfare.

Throughout the history of Africa's development, microfinance has been highly considered and the overall goal of all governments and a driving force of microfinance institutions have been to enable low income entrepreneurs access funds to support their economic activities and acquire income to meet their household demands. For instance, the Second Africa Advocacy Forum held on 14th November 2002 in New York, discussed micro-credit as a solution for Africa in the context of the Millennium Development Goals(MDGs) which include the eradication of extreme poverty and hunger, with a strategy of building global financial systems that meet the needs of the poorest people (United Nations, 2002).

Littlefield, Murduch and Hashemi (2003) have argued that with respect to meeting the MDGs, all of which focus on poverty reduction and socio- economic development, microfinance is a critical contextual factor and it can deliver social benefits on an on-going, permanent basis and on a large scale. Hence, much of the impetus behind the large and increasing support for microfinance hinges on the assumption that its economic and social

impacts are significant and need to be examined more closely, especially in developing countries (Adjei, 2010; GHAMFIN, 2007; Sharma, 2000).

Some research have indicated that microfinance facilities have improved beneficiaries' access to socio-economic facilities such as health, nutrition and education through increased individual and household incomes (Afrane, 2002; Khavul, 2010; Odell, 2010). On the contrary, Khandker (2005) and Karlan and Zinman, (2010) contest the propagated positive impacts of microfinance and claim that microfinance does not reach the poor and even if it does it rather destroys their resourcefulness as a result of repayment difficulties which inhibits acquisition of vital resources (Melzer, 2011). Others have also indicated that, microfinance can be detrimental as well as beneficial to livelihoods of beneficiaries (Husain, Mukherjee & Dutta, 2010; Rooyen, Stewart & De Wet, 2012). These divergent views on effects of microfinance have led to inconclusive claims of poverty reduction in developing countries, including Ghana. Cheston and Kuhn (2002) emphasise the likely effects of increase in income and assets, thereby leading to poverty reduction.

In Ghana, the National Development Planning Commission (NDPC) (2006) claims that despite the increasing decline in poverty incidence, poverty still remains high. Governments of Ghana, in their efforts to improve livelihoods, have employed various strategies focussing on microfinance and human capital development. These include the Micro and Small Loans Centre (MASLOC) scheme (Annim, Awusabo-Asare & Asare-Mintah, 2008), the Ghana Poverty Reduction Strategy (GPRS I &II) which identifies microfinance as a key strategic tool (Adjei, 2010) and the Ghana Shared Growth and Development Agenda (GSGDA) (2010). It is expected that when the schemes are well implemented, poor household incomes would increase and foster the development of a knowledgeable, well-trained and healthy population.

Along with the government's efforts, various non-formal financial institutions including Sinapi Aba Trust (SAT) were set up to provide financial services for productive small and medium businesses and substantial investment has gone into its operations. Sinapi Aba Trust (SAT), is a Non-Governmental Christian Microfinance Institution in Ghana with an affiliation to Opportunity International (OI). SAT was established in 1994 under the Company's code (1963), ACT, (179) as a company limited by guarantee to extend loan facilities to businesses owned by the low income population with the aim of supporting socio-economic development. Sinapi Aba is the local translation of the biblical (Mathew 13: 31-32) mustard seed which express SAT's mission to serve as a "Mustard Seed" through which opportunities for enterprise development and income generation are given to the economically disadvantaged in society to transform their lives (SAT, 1996).

SAT has a long standing establishment in the country with impressive growing client strength and it is among the leading MFIs in Ghana. SAT extends lending facilities to beneficiaries through two main credit methodologies, individual and group loans (SAT, 2008) to meet working capital needs, acquiring capital assets for businesses, buying raw materials, and renovation of business premises for business expansion. The group loan is categorised as trust bank and solidarity groups. It is a development-intensive lending methodology designed to cater for the poorest micro-entrepreneurs. Beneficiaries' livelihood activities cover small-scale manufacturing, food and agriculture, trade and services. As of 2010, SAT had a borrower population of 99,906 and has operated since 1994 as a non-governmental financial organisation, starting in the Ashanti Region.

The Ashanti Region, with a population of 4,725,046 is the most populous region in Ghana (GSS, 2011). SAT's microfinance activities in the Ashanti Region covered seven districts. These were the Kumasi Metropolis, Offinso, Mampong, Obuasi and Asante Akyem municipalities and Ejura Sekyedumase and Atwima Nwabiagya districts. The activities of SAT microfinance programme in these areas have important economic and social consequences on the livelihoods of beneficiaries.

The Kumasi Metropolis (represented by Adum), Obuasi Municipality and Ejura Sekyedumase District have established relationship with SAT in terms of its activities and this made the beneficiaries an important target group to gather empirical findings on the effects of microfinance services on incomes and business capital of beneficiaries. The study areas are geographically positioned in the middle, southern and northern sectors of the region respectively and differ in their levels of infrastructure, credit facilities, commercial and economic activities, making the areas representative of the survey population. The purpose of the study was to examine and document the effects of microfinance services on the incomes and business capital of beneficiaries in the Ghanaian context, as per theories on financial intermediation, and to contribute to existing knowledge in the microfinance and development discourse.

Significance of the study was established on the basis that the effects of microfinance on income is an important measure of the objective of microfinance as a scheme for facilitating improved lives and study findings would augment prevailing trend in microfinance services and effects. The study recognised the differing views on improved incomes of beneficiaries and its impact on the relationship between financial intermediation theory and poverty reduction, empirical results of which can be restrained (Hamada, 2010) or hyped, and by so doing the study contributes to empirical literature by demonstrating how microfinance services facilitate income generation and capital accumulation.

2. Review of related literature

Financial intermediation has a vital role in poverty reduction and development. The theory of financial intermediation deals with how individuals and firms raise and distribute funds for development. The theory assumes that access to finance plays a key role in the ability to increase income generation and employment opportunities, which ultimately lead to increased household incomes and assets. Claessens and Tzioumis (2006) discuss the importance of financial intermediation and affirm that the lack of it can cause persistent income inequality or poverty traps, as well as lower growth. The financial intermediation theory offers itself to the microcredit delivery model, which is the pre-occupation of the microfinance paradigm (Osotimehin, Jegede & Akinlabi, 2011). The rise and establishment of microfinance in the financial system has shown that generally when the poor have access to appropriate financial products they could achieve improved standard of living.

The principal concern of microfinance proponents is the provision of income-generating and savings opportunities to the poor. Microfinance has proven to be an effective strategy for supporting low-income people to improve their livelihoods through developing their entrepreneurial activities. For instance, Kotir and Obeng-Odoom (2009), Mahjabeen (2008) and Midgley (2008) have shown that beneficiaries have been able to earn incomes and establish savings through microfinance services. Evuleocha (2011) corroborates that it has raised incomes and reduced the economic vulnerability of the poor.

Incomes help in meeting the production, consumption and asset building needs of the poor and measuring income levels has been the main approach to assess poverty though Wright (1999) argues that income levels cannot be the only measure, because increasing income does not per se mean that poverty is reduced, as it depends on what the income is used for. Nonetheless, with the goal of microfinance being poverty reduction, changes in beneficiaries' income levels are often used as a measure of the effects of microfinance (Armendàriz & Morduch, 2010) and to establish a relationship between loans and incomes.

One of the earliest and most cited studies that undertook a comprehensive impact analysis on microfinance was conducted by Hossain (1988) on the Grameen Bank programme to evaluate the role of credit in reducing rural poverty. Clients who had been on the programme for more than three years and new clients at the time of the survey were compared. Cross sectional design was used to gather quantitative and qualitative data to examine the effects of loans on beneficiaries' business incomes and acquisition of assets. Descriptive statistics such as frequencies and means were employed to describe variables and relationships. The study observed accumulation of financial capital as the most direct effect of the programme, with working capital increasing three-fold within a period of 27 months. Moreover, investment in fixed assets was about 2.5 times higher for the clients who had participated for more than three years as compared to those who joined during the year of the survey. Hossain (1988) concluded that duration on credit programme has some enhancing influence on asset accumulation. The findings confirm the central argument of the positive relationship between financial intermediation and financial asset acquisition. Adjei's (2010) study concluded that the established clients had significant benefits in the form of accumulation of financial, human and physical assets.

Studies on microfinance have employed various concepts and theories to arrive at varying empirical results. Some of the findings have encountered issues with attribution making it important to mention since a considerable amount of debate on microfinance have centred on attribution of impact. Some of the reasons alluded to are that: clients' livelihoods and the communities in which they live are complex; clients may have multiple income sources; and the credit provided by the MFI is fungible and may not necessarily be used for the required purpose to make it feasible to directly ascribe certain changes, such as increased incomes to microfinance.

Simanowitz (2004) maintains that linking definite units of measurement and ascertaining effects of a programme on socio-economic outcomes can be challenging. Successes in businesses could be due to a myriad of indirect factors such as education level, type of business and the overall income level of clients' households. Brau and Woller (2004) and Ghalib (2009) note that microfinance impact studies are contextually specific and as such, empirical study results could be influenced by the contexts within which the studies are conducted. These contextual specificities enrich information and research results.

3. Methodology

Reviewed literature shows that studies examining the effects of microfinance have been undertaken with varying degrees of challenges and results. To tackle these challenges, discussions have led to an increasing agreement on integrated assessments by combining quantitative, qualitative and participatory methods (Barnes & Sebstad 2000; Hulme, 2000; Kanbur & Squire, 2001; Mayoux & Chambers, 2005). Thus the application of both quantitative and qualitative methods is emerging as the most appropriate approach to arrive at comprehensive conclusions.

The study used the mixed methods approach which employed both quantitative and qualitative methods and applied the descriptive and cross-sectional survey designs. The study sample comprised 361 microfinance beneficiaries made up of 268 females and 93 males from a total population of 8734 who were on the programme for at least two years. The sample size assumed a confidence level of 95 percent, indicating a margin of error of five percent.

In addition to the 361 beneficiaries were 13 senior officers of SAT comprising Branch Managers and Financial Service Officers from Obuasi, Adum and Ejura branches. The Chief Executive Officer was interviewed as a key informant. Both primary and secondary data were collected; focus group discussions, beneficiaries' work place observations and documents including reports were also referred to. Interview schedules and an interview guide were the main instruments used for data collection. The instruments were pre-tested at the Adum branch and the main field data collection took place from September to December 2012.

Data analysis comprised both quantitative and qualitative methods. The quantitative data analysis using the Statistical Product and Service Solutions (SPSS) version 16.0 focused on descriptive and inferential statistics. The descriptive statistics included frequencies, percentages and means and with inferential statistics. The qualitative data were analysed through transcribing, narratives from key informant interviews and focus group discussions. Even though the study was not a gender study, considering the predominance of women in microfinance programmes some gender analysis was done.

4. Results and discussion

4.1 Livelihood Activities of Beneficiaries

Livelihood activities could be influenced by certain factors, such as education, which could affect the domains of change. The necessity in analysing livelihoods is to present a picture of linkages between loans, livelihoods and incomes. The different types of livelihoods were used to compare incomes. The type of livelihoods operated by the respondents in this study is categorised into retail, agriculture/food, education/service and manufacturing. The finding indicates that the majority (62%) of the beneficiaries were engaged in retail trade, 29 percent were into agriculture/food with the remaining beneficiaries having their livelihoods in education/service and manufacturing as shown in Figure 1.
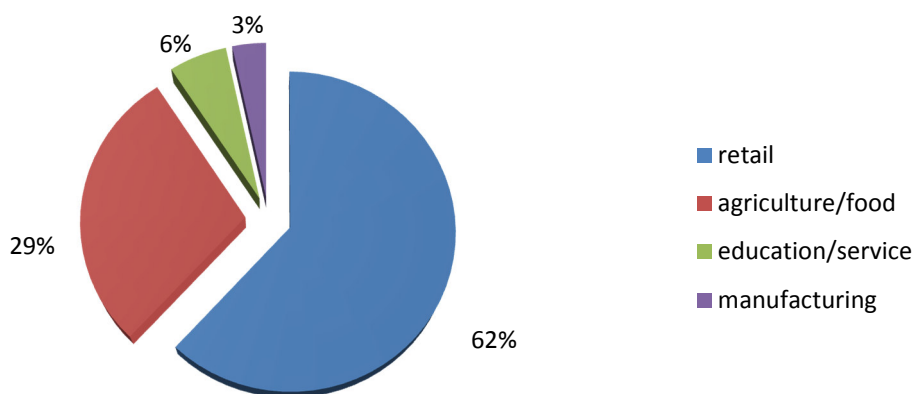

Figure 1: Livelihood activities of respondents
Source: Field survey, 2012

Further analysis was done on the type of businesses being undertaken by the respondents based on sex as shown in Table 1. About 60 percent of the females dominated the retail businesses. In Ghana, the retail sector is known to be dominated by women (GSS, 2013). This could be attributed to the motive that small initial capital and little or no technical acumen is needed to set up trade businesses thus making retail easily accessible or the best option for women who are among the poorest and non-literates (Carré, Holgate & Tilly, 2005). Males, on the other hand, dominated the services and the manufacturing businesses which could be attributed to the technical expertise and financial requirements for such businesses (Broadbridge, 1997).

Table 1: Distribution of livelihood types by sex

Type of business	Female		Male		Total	
	Frequency	%	Frequency	%	Frequency	%
Retail	165	61.7	48	51.6	213	59.0
Agriculture/Food	92	34.3	23	24.8	115	31.9
Service (education)	8	2.9	14	15.0	22	6.0
Manufacturing	3	1.1	8	8.6	11	3.1
Total	268	100.0	93	100.0	361	100.0

d.f = 3; Chi-Square = 32.344; p-value = 0.000
Source: Field survey, 2012

The results in Table 1 show that there is a significant relationship between sex and types of livelihoods

of SAT beneficiaries and that the type of livelihood was dependent on sex. The chi-square statistic of 32.344 with a p-value of 0.000 indicated that the observed differences in type of businesses for males and females are not attributable to chance.

Having multiple businesses was considered for its implication on beneficiary incomes. The respondents were asked whether they had other businesses that were not linked to the SAT programme. From the survey, 33.5 percent of the beneficiaries indicated that they had other businesses whilst 66.5 percent indicated otherwise. This implies that almost two-thirds of the beneficiaries had incomes mainly from SAT services. The other businesses were dominated by retail followed by agriculture/food and services.

4.2 Microfinance services effects on incomes

Incomes help in meeting the production, consumption and asset building needs of the poor. Above ninety percent of beneficiaries reported that they have been able to increase their business incomes as a result of SAT services. This enhances the consumption levels of families, reduce income inequality and enhance welfare similar to what Mahjabeen (2008) concluded, thereby, creating opportunities for investment in economic and social assets. Microfinance business incomes have been observed to facilitate consumption smoothing and capital acquisition (Adjei, Arun & Hossain, 2009). Respondents were asked to indicate whether their businesses sponsored by SAT were their main sources of income and whether the income status has changed. Results in Table 2 show that 283 beneficiaries of the respondents, reported that, SAT assisted businesses were the main sources of income. The remaining 78 indicated that they had incomes from other sources such as salary work and family members.

Table 2: Main source of income and increase in income of beneficiaries

Income	Main source		Not main source		Total	
	Freq.	%	Freq.	%	Freq.	%
Increase	265	93.6	70	89.7	335	92.8
No increase	18	6.4	8	10.3	26	7.2
Total	283	100.0	78	100.0	361	100.0

Source: Field survey, 2012

From Table 2, the majority (93.6%) of the respondents who reported that their SAT supported businesses were the main source of income observed increase in incomes. This finding was consistent with those of some other researchers. Mosley (2001), in a study in Bolivia, observed a positive link between microfinance programme participation and reduction in poverty through increased incomes. Also, Kotir and Obeng-Odoom (2009), Mahjabeen (2008) and Midgley (2008) have shown that beneficiaries have been able to earn incomes and have saved through microfinance services. About 6.4 percent however, indicated no increase in income.

The study undertook a comparative analysis of beneficiaries' average monthly incomes before and after obtaining SAT services to measure changes in income and to establish a relationship between the SAT loans and incomes. The study recognises the reality of fungibility whereby other sources of funds could be used in the respondents' businesses and also that reported incomes may include those from other overt and concealed sources. In order to minimise fungibility in arriving at average incomes, data collected on income were restricted to income generating businesses that were supported by SAT.

The average monthly incomes were derived from working out the daily or weekly incomes of the beneficiaries which were then estimated into monthly incomes. The summary statistics (Table 3) show that the mean monthly income after obtaining SAT was GH¢485.04 whilst that before the SAT services was GH¢245.90. The result indicates an increase in incomes after receiving SAT services. The paired sample T-test was used for a pooled estimate of variances in the incomes and to test the significance of the difference in incomes before and after the microfinance services of SAT. Discussion emphasises variation in income as one of the main domains of change from microfinance services and the results have shown the extent to which microfinance services can produce a general positive effect on incomes of beneficiaries of SAT.

Further analysis was done using the World Bank Atlas Method based on 2011 economy classifications, which indicated the Gross National Income (GNI) per capita as: low income, $1,025 or less, lower middle income, $1,026–4,035, upper middle income, $4,036–12,475 and high income, $12,476 or more (World Bank, 2013). The mean monthly income was reported as the average and from the classification of beneficiaries' monthly mean income of GH¢485.04. This was annualized to GH¢5,820.48 or $2,910.24, at a conversion rate of GH¢2: $1as of November, 2012, which put the beneficiaries in the lower middle income group.

Table 3: Differences in average monthly income of beneficiaries before and after SAT services

SAT Services	Mean GH¢	Median GH¢	Mode GH¢	Std. Dev	Skew-ness	Std. Error of skew-ness	Std. Error Mean	Sig. (2-tailed)
Before	245.90	200	200	212.55	3.08	0.15	13.28	0.00
After	485.04	400	300	318.21	2.88	0.15	19.88	0.00
Total	730.94	600	500	530.76	5.96	0.30	33.16	0.00

n = 256
Source: Field survey, 2012

The skewness values in Table 3 indicates that for both the before and after loan acquisition, the values exceeded 0.5. According to Bryman (2008), normality of distribution can be assumed when skewness of ±0.5 is estimated. This implies that the distribution of the incomes among the respondents was not normal. To undertake a further comparison of the two loan groups, a non-parametric procedure, Mann Whitney U-Test, was used for the analysis and the results are provided in Table 4.

Table 4: Differences on monthly average income of individual and group beneficiaries

SAT services	Type of loan	Freq.	Mean Rank GH¢	Sum of Ranks	Mann-Whitney U
Before	Individual	112	157.40	17628.50	827.50
	Group	144	106.02	15267.50	
Total		256	263 .42	32896.00	
	Individual	112	154.30	17282.00	5174.00
After	Group	144	108.43	15614.00	
Total	`	256	262.73	32896.00	10001.50

N = 256; p-value = 0.000
Source: Field survey, 2012

Results from the Mann-Whitney U Test (Table 4) show that the differences in the mean ranks had a p-value of 0.000 indicating that there is a relationship between microfinance services and incomes. This implies that there are significant differences in the incomes of both individual and group loan beneficiaries before and after receiving SAT loans. The results were similar to Khandker's, Khalily and Khan (1995) and Adjei's (2010) findings that microfinance services facilitated increases in beneficiary incomes.

Further discussions were made on the relationship between the type of loans and average monthly incomes. Table 5 reveals that the individual-based loan beneficiaries had higher average incomes for both the incomes after and before obtaining SAT services compared to the group-based loan beneficiaries. Individual-based loan beneficiaries after joining SAT had a mean monthly income of GH¢567.23 as against the group-based loan beneficiaries who accrued a mean monthly income of GH¢417.64. Similarly, the statistics of beneficiaries before joining SAT reveals a mean monthly income of GH¢313.12 and GH¢193.61 for individual and group based loan beneficiaries respectively.

Table 5: Type of loan and average monthly income

Average income	Type of loan	Freq.	Mean monthly Income(GH¢)	Std. Dev.	T	COV	Std. Error Mean	Sig.(2-tailed)
Before	Individual	112	313.12	247.47	4. 70	0.79	23.38	0.000
	Group	144	193.61	163.50	4. 41	0.84	13.62	0.000
After	Individual	112	567.23	352.14	3. 90	0.62	33.27	0.000
	Group	144	417.64	264.20	3. 74	0.63	22.02	0.000
Total			1491.60	1027.31	16.75	0.69	92.29	0.000

Source: Field survey, 2012

The variations in the mean monthly income of beneficiaries before SAT services were higher than after SAT services as shown by the corresponding coefficients of variation (COV). This implies that income inequality had reduced after SAT services. The results also show that incomes from individual loans were higher than incomes from group loans. The p-value of 0.000 shows that the type of loan has an influence on the incomes. This suggests that the type of loan, which is a factor in the domains of change, is an important determinant in the income levels of beneficiaries. Madajewicz (2011) observed that individual loan businesses grew more than that of group loans. The reliability of the increased incomes is indicated by the assertions of beneficiaries.

The improved mean incomes for both individual and group beneficiaries before and after the SAT services were corroborated by responses from focus group discussions and few quotes were selected from the transcripts for illustration (Krueger, 1988). A female focus group discussant stated that:

"Before SAT services, I did not have adequate skills in separating my business incomes and overall expenditures. It was therefore difficult for me to track my actual incomes and I felt my monies and for that matter my income was being 'spirited' away by some unseen forces. With education from SAT loan officers on basic accounting and prudent uses of my money, I was able to sort out my incomes from other monies and well".

Some of the respondents explained that with the SAT services they could make bulk purchases of items to retail and were able to make more profit from sales. Another woman added that:

"With my income, I have been able to build a container in which I am going to sell my second
–hand clothing and I can now store my goods very well".

Another discussant said that:

"I have been able to build a store room for my business and this will help me to sell from it
without necessarily going on trek".

The loan officers corroborated the beneficiaries' assertion by explaining that they were able to monitor their expenses and savings better and some of them had even opted for individual loans which suggest improvement in business capital and other assets. In this respect, Otero (1999) observed that microfinance establishes access to productive capital for the poor to undertake income generating activities that help people to move out of poverty. A further analysis of the average monthly income as per the livelihood types of beneficiaries is presented in Table 6. The highest mean income of GH¢520.00 was obtained by manufacturers followed by retailers, GH¢501.84. The lowest mean monthly income of GH¢432.21 was obtained by beneficiaries in agriculture/food.

Table 6: Monthly income per livelihood of beneficiaries after SAT loans

Type of Livelihood	Mean (Gh¢)	Median (Gh¢)	Std. Dev	CV	Skewness	Std. Error Of Skewness
Retail	501.84	433.93	422.89	0.84	3.89	0.18
Agriculture/food	432.21	340.00	37.91	0.78	1.28	0.26
Education/Service	491.67	466.67	204.54	0.42	0.64	0.54
Manufacturing	520.00	383.33	345.77	0.66	1.56	0.69
Total	481.81	406.67	387.30	0.80	3.43	0.14

Chi-sq.= 11.78; p-value = 0.008
Source: Field survey, 2012

From the statistical summary, the distribution of income was not normally distributed based on the overall skewness of 3.43. To test the statistical differences among the livelihood groups the Kruskal Wallis Test was used to compare the median (Pallant, 2005) for representative averages. Hence the overall median monthly income was GH¢406.67. The test for significant differences indicated a chi-square statistics of 11.776 and a p-value of 0.008 showing that the differences among the median monthly incomes from the various livelihood types were statistically significant at an alpha level of 0.05. The coefficients of variation show that the variation in monthly income for retail was highest (0.84) while it was lowest for education/service (0.42). According to the Ghana Statistical Service (2008), the mean annual household income in Ghana was GH¢1,217.00 with average per capita income almost GH¢400. It presents the upper poverty line at GH¢370.89 adults per year and a lower poverty line as GH¢ 288.47 adult per year. The above analysis is an indication that the SAT beneficiaries' mean incomes are higher than that of the National.

The results are consistent even when the nominal rates were adjusted to include the rate of inflation. The Consumer Price Index (CPI) measures changes over time in the general price level of goods and services. Using the real income formula of:

$$\text{Real income} = \frac{\text{Nominal Income}}{\text{CPI}} \times 100$$

as per the World Bank (2013), the incomes for the various types of livelihood, led to annual real incomes of GH¢2,685.55, GH¢2,312.93, GH¢2,631.13, GH¢2,782.73 for retail, agriculture/food, education/services and manufacturing respectively. The theory of financial intermediation put emphasis on income levels and their influence on other assets. The study results support financial intermediation theorists' claim that financial intermediation plays a key role in the ability to increase income (Meier, 2001). In line with the study findings, the corollary of a relationship between financial intermediation and poverty reduction in terms of cash has been validated.

According to Afful and Annim (2008), the main reason for the increasing theoretical and empirical studies from the microfinance arena is that since microfinance is an aspect of financial development, if a causal relationship can be established between financial development and poverty reduction then most likely there could

be a comparable correlation between microfinance and socio-economic well-being. The results suggest that there is a correlation between microfinance and incomes which could be used to support socio-economic development. Based on the World Bank income groupings, all the livelihood income groups were at the lower middle income levels(World Bank, 2013).

4.3 Microfinance services effects on business capita

The study also explored how the increase in income and other services from SAT have affected business status and working capital which is an important asset for beneficiaries' business improvement. Changes in working capital affect the nature of business and income in microfinance studies. Hossain (1988) found out that accumulation of working capital increased three-fold within a period of 27 months for loan beneficiaries. The description of the perceptual survey instrument in Table 7 shows that 335 (92.8%) of sampled beneficiaries indicated that their working capital had increased. The result corroborates that of Hossain (1988) and confirms the general perception that income status of beneficiaries improve after obtaining microfinance services. Change in working capital seems to be a major yardstick for assessing the gains made from obtaining the SAT services. There were indications from the focus group discussions that their working capital had expanded and consequently led to increased incomes. Assessment of the working capital was mainly done with the quantity of goods on sale and in some instances, whether they had been able to diversify their businesses.

Table 7:   Change in working capital of beneficiaries after joining SAT

Change	Frequency	Percent
Increased	335	92.8
Remained the same	15	4.2
Decreased	11	3.0
Total	361	100.0

Source: Field survey, 2012

The results from beneficiaries were corroborated by the 12 loan officers and branch managers interviewed. According to them, SAT services had generally raised the business capital and incomes of more than 90 percent of their clients. These results were attributed to the loans and delivery of business related services. In a related study, Black, King and Tiemoko (2003) found that business training and awareness creation were important in the promotion of small businesses. According to a key informant of SAT, the financial appraisal of clients' turnover shows an increase in business capital even though some of the clients did complain that the interest rate charges were high.

The change in status of business was related to factors such as increase in number of customers, marketing information, customer relations and stock of business items. Table 8 reveals that 51.5 percent of the respondents reported that they had very high improvement in their businesses. Thirty-three percent ranked their business improvement as high with the remaining indicating that their business improvement position was fairly high or low or very low.

Table 8: Improvement in status of beneficiaries' businesses

Improvement	Frequency	Percent
Very low	2	0.6
Low	8	2.2
Fairly high	44	12.2
High	121	33.5
Very high	186	51.5
Total	361	100.0

Source: Field survey, 2012

Both staff and beneficiaries reported that the trainings have enhanced business practices and that has resulted in the improvement. The increase in customers was also as a result of increase in stocks through the SAT loans. This attracts more customers to their shops and business places. The analysis shows that SAT programmes have impacted positively on beneficiaries businesses, which suggests that the objectives of SAT for providing services to improve the socio-economic lives of their clients had been achieved.

5. Conclusions

This paper set out to examine the effects of microfinance services on incomes of beneficiaries and reckons that SAT services led to improvements in incomes. Most of the SAT beneficiaries were classified under the lower middle income group and were earning incomes higher than the national average. Beneficiaries in the manufacturing sector earned higher incomes than those from the other livelihoods. Those with the lowest income were beneficiaries from the agriculture and food sector. Generally, individual loan beneficiaries had the highest incomes compared to those who acquired group loans. The group loan beneficiaries comprise trust bank and

solidarity groups whose loan sizes were relatively smaller. It was identified that larger loan sizes had positive impact on increased income. The implication is that microfinance has the potential of increasing the incomes of beneficiaries.

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